We claim:

1. A method for making an adaptive liquid crystal lens system that is continuously tunable, comprising the steps of:

(a) aligning a first planar substrate and a second planar substrate in a parallel arrangement;

(b) implanting a curved electrode in the first planar substrate;

(c) implanting a flat electrode in the second planar substrate;

(d) connecting voltage to the curved electrode and the flat electrode;

(e) combining the first planar substrate with the second planar substrate to form a cell for containment of a liquid crystal.

(f) inserting a homogeneous nematic liquid crystal (LC) layer into the cell between the planar substrates;

(g) applying voltage across the homogeneous LC layer;

(h) controlling the applied voltage, thereby allowing the focal length of the lens to be continuously tunable.

2. The method of claim **1**, wherein the first planar substrate has a concave lens surface and a concave valley.

3. The method of claim **2**, wherein the concave lens surface is coated with a transparent electrode.

4. The method of claim **3**, wherein the transparent electrode is indium tin oxide (ITO).

5. The method of claim **2**, wherein the concave valley is filled with a transparent material to form a planar substrate.

6. The method of claim **5**, wherein the transparent material is selected from a glass or polymeric material.

7. The method of claim **2**, wherein the first planar substrate having a concave lens surface with curved electrode is positioned below the homogeneous nematic LC cell to form a positive adaptive LC lens.

8. The method of claim **2**, wherein the first planar substrate having a concave lens surface with curved electrode is positioned above the homogeneous nematic LC cell to form a negative adaptive LC lens.

9. The method of claim **1**, wherein the curved electrode in the first planar substrate is annular ring-shaped Fresnel grooved.

10. The method of claim **9**, wherein the annular ring-shaped Fresnel grooved electrode is filled with a transparent material to form a planar substrate.

11. The method of claim **10**, wherein the transparent material is selected from a glass or polymeric material.

12. The method of claim **1**, wherein the flat electrode in the second substrate is replaced by a curved electrode having the same shape as the curved electrode in the first planar substrate.

13. The method of claim **12**, wherein the first planar substrate with curved electrode and the second planar substrate with curved electrode are in parallel alignment on opposite sides of an arrangement of a first homogeneous LC layer and a second homogeneous LC layer separated by a transparent material of uniform thickness.

14. The method of claim **13,** wherein the first and second homogeneous liquid crystal layers are in orthogonal alignment and the curved electrode in each planar substrate is positioned to form a concave mirror image.

15. The method of claim **14**, wherein a polarization independent positive lens is formed.

16. The method of claim **13,** wherein the first and second homogeneous liquid crystal layers are in orthogonal alignment and the curved electrode in each planar substrate is positioned to form a convex mirror image.

17. The method of claim **16**, wherein a polarization independent negative lens is formed.

18. An adaptive liquid crystal lens system made by the method of claim **1.**

19. An adaptive liquid crystal lens system made by the method of

(a) aligning a first planar substrate and a homogeneous LC cell having a second planar substrate including a flat electrode, in a parallel arrangement;

(b) implanting a curved electrode in the first planar substrate;

(c) connecting voltage to the curved electrode and the flat electrode;

(d) combining the first planar substrate with the homogeneous LC cell to form a continuously tunable positive lens when voltage is applied across the homogeneous LC cell.

20. The adaptive LC lens system of claim **19**, wherein the first planar substrate has a concave lens surface and a concave valley.

21. The adaptive LC lens system of claim **20**, wherein the concave lens surface is coated with a transparent electrode.

22. The adaptive LC lens system of claim **21**, wherein the transparent electrode is indium tin oxide (ITO).

23. The adaptive LC lens system of claim **20**, wherein the concave valley is filled with a transparent material to form a planar substrate.

24. The adaptive LC lens system of claim **23**, wherein the transparent material is selected from a glass or polymeric material.

25. A continuously tunable, adaptive liquid crystal lens system comprising:

a curved electrode in combination with at least one homogeneous nematic liquid crystal (LC) layer wherein the lens system is used.

26. The continuously tunable, adaptive liquid crystal lens system of claim **25**, wherein the curved electrode is concave.

27. The continuously tunable, adaptive liquid crystal lens system of claim **25**, wherein the curved electrode is convex.

28. The continuously tunable, adaptive liquid crystal lens system of claim **25**, wherein the curved electrode is annular ring-shaped Fresnel grooved.

29. A method of continuously tuning an adaptive liquid crystal lens system, comprising the steps of

(a) aligning a curved electrode directly to a curved lens;

(b) applying a voltage;

(c) continuously tuning the system by controlling the applied voltage.